

I/We Claim:

1. A computer readable medium storing computer executable instructions configured to allow a user to set attributes of individual cells in a multi-dimensional array, comprising:

- a) determining a value of a first attribute to be applied to the multi-dimensional array, the first attribute being associated with a first color channel;
- b) determining a value of a second attribute to be applied to the multi-dimensional array, the second attribute being associated with a second color channel;
- c) determining a value of a third attribute to be applied to the multi-dimensional array, the third attribute being associated with a third color channel;
- d) receiving user input selecting a cell in a graphical depiction of the multi-dimensional array;
- e) applying the values of the first, second, and third attributes to the selected cell; and
- f) shading the selected cell a color based on the values of the first, second, and third attributes.

2. The computer readable medium of claim 1, wherein the computer executable instructions further comprise repeating steps d) – f) for a plurality of user-selected cells in the graphical depiction of the multi-dimensional array.

3. The computer readable medium of claim 1, wherein the computer executable instructions further comprise:

- g) receiving user input modifying at least one of the first, second, and third attributes to be applied to the multi-dimensional array;
- h) receiving user input selecting a second cell in the graphical depiction of the multi-dimensional array;
- i) applying the values of the first, second, and third attributes, as modified, to the second selected cell; and
- j) shading the second selected cell a second color based on the values of the first, second, and third attributes, as modified.

4. The computer readable medium of claim 3, wherein the computer executable instructions further comprise repeating steps h) - j) for a plurality of user-selected cells in the graphical depiction of the multi-dimensional array.

5. The computer readable medium of claim 1, wherein step f) comprises:

- i) determining a first color channel intensity based on the determined value of the first attribute;
- ii) determining a second color channel intensity based on the determined value of the second attribute;
- iii) determining a third color channel intensity based on the determined value of the third attribute; and
- iv) combining the color channel intensities to determine the shading color.

6. The computer readable medium of claim 5, wherein the first color channel is a red color channel, the second color channel is a green color channel, and the third color channel is a blue color channel.

7. The computer readable medium of claim 5, wherein:

step i) comprises:

- A) determining a base-zero position of the determined value of the first attribute in a range of allowable values of the first attribute;
- B) determining a first multiplier by dividing a maximum allowable first color channel intensity by a base-zero position of the maximum allowable value of the first attribute; and
- C) determining the first color channel intensity by multiplying the first multiplier by the base-zero position of the determined value of the first attribute,

step ii) comprises:

- A) determining a base-zero position of the determined value of the second attribute in a range of allowable values of the second attribute;
- B) determining a second multiplier by dividing a maximum allowable second color channel intensity by a base zero

position of the maximum allowable value of the second attribute; and

- C) determining the second color channel intensity by multiplying the second multiplier by the base zero position of the determined value of the second attribute, and

step iii) comprises:

- A) determining a base-zero position of the determined value of the third attribute in a range of allowable values of the third attribute;
- B) determining a third multiplier by dividing a maximum allowable third color channel intensity by a base zero position of the maximum allowable value of the third attribute; and
- C) determining the third color channel intensity by multiplying the third multiplier by the base zero position of the determined value of the third attribute.

8. The computer readable medium of claim 1, wherein each attribute defines an aspect of a terrestrial condition.

9. The computer readable medium of claim 8, wherein each attribute defines an aspect of a weather condition.

10. The computer readable medium of claim 1, wherein the graphical depiction of the multi-dimensional array comprises a two-dimensional array displayed on a display device.

11. The computer readable medium of claim 8, wherein the computer executable instructions further comprise exporting the multi-dimensional array in a data format usable by a computer game to simulate terrestrial conditions.

12. The computer readable medium of claim 9, wherein the computer executable instructions further comprise exporting the multi-dimensional array in a data format usable by a computer game to simulate weather conditions.

13. The computer readable medium of claim 10, wherein each cell of the two-dimensional array corresponds to a geographical area.

14. The computer readable medium of claim 13, wherein the geographical area to which each cell of the two dimensional array correspond is of a same size.

15. The computer readable medium of claim 5, wherein the each color channel intensity gets darker as the determined value of the color channel's corresponding attribute gets more severe.

16. A computer readable medium storing computer executable instructions configured to allow a user to set attributes of individual cells in a multi-dimensional array, comprising:

- a) determining a value for each of a plurality of attributes that can be applied to the multi-dimensional array;
- b) determining a state of a flag corresponding to each of the plurality of attributes, wherein the flag indicates whether or not the corresponding attribute should be applied to the multi-dimensional array;
- c) receiving user input selecting a cell in a graphical depiction of the multi-dimensional array;
- d) applying to the selected cell the values of each of the plurality of attributes whose flag indicates that the corresponding attribute should be applied to the multi-dimensional array; and
- e) providing visual feedback that the flagged attribute(s) have been applied to the selected cell.

17. The computer readable medium of claim 16, wherein step e) comprises shading the selected cell.

18. The computer readable medium of claim 16, wherein each attribute defines an aspect of a weather condition.

19. The computer readable medium of claim 18, wherein the computer executable instructions further comprise exporting the multi-dimensional array in a data format usable by a computer game to simulate weather.

20. The computer readable medium of claim 17, wherein step e) comprises shading the selected cell a color based on the values of three of the plurality of attributes.

21. The computer readable medium of claim 20, wherein step e) comprises:
- i) determining a first color channel intensity based on the value of a first attribute;
 - ii) determining a second color channel intensity based on the value of a second attribute;
 - iii) determining a third color channel intensity based on the value of a third attribute; and
 - iv) combining the color channel intensities to determine the shading color.

22. The computer readable medium of claim 21, wherein the first color channel is a red color channel, the second color channel is a green color channel, and the third color channel is a blue color channel.

23. The computer readable medium of claim 22, wherein:
step i) comprises:

- A) determining a base-zero position of the determined value of the first attribute in a range of allowable values of the first attribute;
- B) determining a first multiplier by dividing a maximum allowable first color channel intensity by a base zero position of the maximum allowable value of the first attribute; and
- C) determining the first color channel intensity by multiplying the first multiplier by the base zero position of the determined value of the first attribute,

step ii) comprises:

- A) determining a base-zero position of the determined value of the second attribute in a range of allowable values of the second attribute;
- B) determining a second multiplier by dividing a maximum allowable second color channel intensity by a base zero position of the maximum allowable value of the second attribute; and
- C) determining the second color channel intensity by multiplying the second multiplier by the base zero position of the determined value of the second attribute, and

step iii) comprises:

- A) determining a base-zero position of the determined value of the third attribute in a range of allowable values of the third attribute;
- B) determining a third multiplier by dividing a maximum allowable third color channel intensity by a base zero position of the maximum allowable value of the third attribute; and
- C) determining the third color channel intensity by multiplying the third multiplier by the base zero position of the determined value of the third attribute.

24. The computer readable medium of claim 20, wherein the computer executable instructions further comprise receiving user input identifying one or more of the three attributes of the plurality of attributes.

25. The computer readable medium of claim 22, wherein the computer executable instructions further comprise receiving user input identifying which of the three attributes corresponds to each of the red, green, and blue color channels.

26. The computer readable medium of claim 16, wherein step e) comprises shading the selected cell darker as more attributes' flags indicate that the attributes should be applied to the multi-dimensional array.

27. A computer-readable medium storing computer executable instructions that, when executed, display a user interface on a computer display device, said user interface comprising:

a first interface component displaying a list of attributes corresponding to a user-selected attribute layer, wherein a user can specify an attribute value corresponding to each attribute in the list; and

a second interface component displaying a two-dimensional grid representative of a location-neutral geographical area wherein, when the user selects a cell within the grid, the user interface shades the selected cell based on the current values of a plurality of attributes in the list of attributes corresponding to the user-selected attribute layer.

28. The computer readable medium of claim 27, wherein the user interface further comprises a third interface component displaying a list of a plurality of attribute layers selectable by the user.

29. The computer readable medium of claim 28, wherein the list of attribute layers comprises a hierarchical list of attribute layers.

30. The computer readable medium of claim 27, wherein each attribute layer corresponds to a type of terrestrial condition, and each attribute of the attribute layer identifies an aspect of the type of terrestrial condition to which it corresponds.

31. The computer readable medium of claim 30, wherein each type of terrestrial condition comprises a type of weather condition, and each attribute identifies an aspect of the type of weather condition to which it corresponds.

32. The computer readable medium of claim 27, wherein the user-interface shades the selected cell based on a first color channel having a first color channel intensity based on a first attribute, a second color channel having a second color channel intensity based on a second attribute, and a third color channel having a third color channel intensity based on a third attribute.

33. The computer readable medium of claim 32, wherein the first color channel is a red color channel, the second color channel is a blue color channel, and the third color channel is a green color channel.

34. In a computer system having a graphical user interface including a display and a user interface selection device, a method of providing and selecting from interactive elements on the display, comprising:

displaying a list of attributes on a first portion of the display, wherein a user can modify an attribute value corresponding to each attribute in the list; and

displaying a two-dimensional grid on a second portion of the display, said two-dimensional grid representative of a location-neutral geographical area; and

shading a selected cell within the grid when the user selects the cell, wherein the shading is based on the current values of a plurality of attributes in the list of attributes.

35. The method of claim 34, further comprising displaying on a third portion of the display a list of a plurality of attribute layers selectable by the user, wherein said list of attributes corresponds to a user-selected attribute layer displayed on the third portion of the display.

36. The method of claim 35, wherein the list of attribute layers comprises a hierarchical list of attribute layers.

37. The method of claim 35, wherein each attribute layer corresponds to a type of terrestrial condition, and each attribute of the attribute layer identifies an aspect of the type of terrestrial condition to which it corresponds.

38. The method of claim 37, wherein each type of terrestrial condition comprises a type of weather condition, and each attribute identifies an aspect of the type of weather condition to which it corresponds.

39. The method of claim 34, wherein shading a selected cell comprises shading the selected cell based on a first color channel having a first color channel intensity based on a first attribute, a second color channel having a second color channel intensity based on a

second attribute, and a third color channel having a third color channel intensity based on a third attribute.

40. The method of claim 39, wherein the first color channel is a red color channel, the second color channel is a blue color channel, and the third color channel is a green color channel.